

**RESIN SEALED TYPE SEMICONDUCTOR DEVICE**

Patent Number: JP4098864  
Publication date: 1992-03-31  
Inventor(s): TAKASAKI YUKAKO  
Applicant(s): NEC KYUSHU LTD  
Requested Patent: ☐ JP4098864  
Application Number: JP19900216146 19900816  
Priority Number(s):  
IPC Classification: H01L23/50  
EC Classification:  
Equivalents:

**Abstract**

**PURPOSE:** To protect outer leads against deformation such as bend and to prevent soldering from deteriorating in reliability by a method wherein a support protruding from the side face of the outer lead toward an adjacent outer lead and insulators provided between the adjacent supports so as to connect them together are provided.

**CONSTITUTION:** A lead frame is provided with inner leads 2 provided around an island 1, outer leads 4 provided outside a resin sealed region 3 and connected to the inner leads 2, a tie bar 5 provided near the resin sealed region 3 to support the outer leads 4 interlinking them together, a support 6 whose ends are projected and recessed so as to enable them to be engaged with each other and which protrude from the side face of the outer lead 4 distant from a resin sealed region toward the adjacent outer lead 4, and an insulator 7 provided to be interposed between the adjacent supports 6 so as to interlink the supports 6 together. By this setup, leads can be protected against deformation caused by external shock and improved in reliability of soldering at mounting.

Data supplied from the esp@cenet database - I2